

WHAT IS CLAIMED

- 5 1. An energy absorber adapted for attachment to a vehicle for absorbing forces generated from an impact, said energy absorber comprising a blow molded unitary structure having a rearward facing support portion and a crushable forward projecting portion adapted to crush upon impact.
- 10 2. An energy absorber adapted for attachment to a vehicle for absorbing forces generated from an impact according to claim 1 wherein said energy absorber has an elongated shape and is adapted for mounting to the forward end of a vehicle for extending longitudinally across the width of the vehicle.
- 15 3. An energy absorber adapted for attachment to a vehicle for absorbing forces generated from an impact according to claim 2 wherein said energy absorber is adapted for pedestrian leg protection and has a highly efficient crush mode.
4. An energy absorber adapted for attachment to a vehicle for absorbing forces generated from an impact according to claim 2 is adapted to reduce forces of impact with legs of a pedestrian.
- 20 5. An energy absorber adapted for attachment to a vehicle for absorbing forces generated from an impact according to claim 2 wherein the energy absorber is adapted to absorb energy during an impact of said vehicle at low speeds of less than or equal to 5Mph.
- 25 6. An energy absorber adapted for attachment to a vehicle for absorbing forces generated from an impact according to claim 2 said energy absorber consist essentially of a single integral unit of blow molded material.
7. An energy absorber adapted for attachment to a vehicle for absorbing forces generated from an impact according to claim 6 wherein said forwardly projecting portion comprises a plurality of forwardly projecting crushable members.
- 30 8. An energy absorber adapted for attachment to a vehicle for absorbing forces generated from an impact according to claim 7 wherein said energy absorber includes a support portion for said crushable lobes, said support portion being adapted for attachment to bumper beam.
- 35 9. An energy absorber adapted for attachment to a vehicle for absorbing forces generated from an impact according to claim 8 wherein said plurality of crushable members extend outwardly from the support portion, each of said crushable members having a forwardly facing front wall, at least a pair of adjacent lobes having interconnecting front walls.

10. An energy absorber adapted for attachment to a vehicle for absorbing forces generated from an impact according to claim 9 wherein said plurality of the crush means are attached longitudinally across the front of the support portion.

5 11. An energy absorber adapted for attachment to a vehicle for absorbing forces generated from an impact according to claim 10 wherein said plurality of crushable members project forwardly and are spaced apart longitudinally across said support portion.

10 12. An energy absorber adapted for attachment to a vehicle for absorbing forces generated from an impact according to claim 13 wherein said energy absorber comprises a thermoplastic resin.

13. An energy absorber adapted for attachment to a vehicle for absorbing forces generated from an impact according to claim 12 wherein said thermoplastic polymer comprises polyolefin, a polyester resin, a polycarbonate, or mixtures thereof.

15 14. An energy absorber adapted for attachment to a vehicle for absorbing forces generated from an impact according to claim 13 wherein said polyester is a polyalkylene terephthalate, a high density polyethylenes, a low density polyethylene, a polyamide or mixtures thereof.

20 15. An energy absorber adapted for attachment to a vehicle for absorbing forces generated from an impact according to claim 14 wherein said polyester is polybutylene terephthalate and said polycarbonate is an aromatic polycarbonate.

25 16. An energy absorber adapted for attachment to a vehicle for absorbing forces generated from an impact according to claim 10 wherein said energy absorber is interposed between the fascia and reinforcing bumper beam, said vehicle bumper being attachable to the front of an automotive vehicle, said fascia enveloping the energy absorber and reinforcing beam such that neither component other than the fascia is visible once attached to the vehicle.